

Abstract

Easily Isolated, Oversize Fuel Cell Stack Cooler Plates

A plurality of cooler plates (9) are disposed between fuel cells (8) in a stack (7) and have protrusions (12, 13) which include coolant inlet and outlet channels (15). The protrusions are surrounded by an elastomeric sealant material (35, 36) which forms a seal with the manifold structures (27, 28) to form coolant inlet and outlet manifolds (17, 20). The sealant material prevents coolant from entering fuel cells along the edges thereof, thereby preventing the fuel cells from being poisoned by the coolant. The coolant inlet and outlet manifold structures (27, 28) also define reactant gas manifolds (18, 21).